

REMARKS

Claims 1, 3 - 27, 29 - 54, 58 - 63 and 65 - 67 remain active in this application. Claims 2, 28 55 - 57 and 64 have been canceled without prejudice of disclaimer. No new matter has been introduced into the application.

The indication of allowability of claims 2, 3, 10, 15, 24, 28, 29, 36, 41, 49, 52 - 54 and 65 - 67 is noted with appreciation. In the above amendments, claims 2 and 28 have been canceled and their salient recitations included in claims 1 and 27, respectively. Claims 10, 29 and 36 have been rewritten in independent form and dependency and some terminology of all other claims has been revised to be dependent on claims which have been indicated as being allowable. However, it is noted that the current office action does not appear to indicate any disposition in regard to claim 9, which has been retained in dependent form, depending on claim 1 through claim 7 and thus should be allowable in any case.

Claims 1, 4 - 8, 11 - 14, 16 - 23, 25 - 27, 30 - 34, 37 - 40, 42 - 48, 50, 51 and 55 - 64 have been rejected under 35 U.S.C. §102 as being anticipated by Billard. This sole ground of rejection is respectfully traversed for the reasons of record and as being moot in view of the above amendments.

In summary of the remarks previously presented and in answer to the Examiner's response thereto, the sensory feedback of Billard et al. is indicative of the angle of joints and is used to simulate the contraction of biological muscles to achieve the correct/desired angle of joint movement or position which is "tonic" or (as the Examiner has observed) non-oscillatory. See Section 3 of Billard et al., last sentence. However, the Examiner has

not demonstrated any disclosure of Billard et al. which teaches use of such feedback to directly control or adapt operation of a central pattern generator which produces rhythmic or oscillatory signals and resultant rhythmic or oscillatory activity or motions.

Further, the Examiner has now explicitly stated that no patentable weight has been accorded to the recitations of "biological neurons" which is clearly improper, particularly in a rejection for anticipation. The arrangement of Billard clearly is not adaptable to biological systems since it does not mimic the actions of real neurons, particularly in regard to rhythmic activity (as opposed to "tonic" or non-oscillatory/non-rhythmic functions which Billard discloses), as claimed. This distinction is respectfully submitted to be highly significant since it supports use of the invention in connection with biological systems (of which Billard is incapable) as well as providing improved performance in robotic applications. Therefore, the Examiner has not made and cannot make a *prima facie* demonstration of anticipation (or obviousness) and the sole ground of rejection is clearly in error.

Nevertheless, to expedite the prosecution of this application, the above amendments have been made to place claims indicated to be allowable into independent form and to amend all other claims to depend therefrom. Therefore, it is respectfully submitted that the application is now in *prima facie* condition for allowance and such action is respectfully requested.

Since all rejections, objections and requirements contained in the outstanding official action have been fully answered and shown to be in error and/or inapplicable to the present claims, it is respectfully submitted that reconsideration is now in order under the

provisions of 37 C.F.R. §1.111(b) and such reconsideration is respectfully requested. Upon reconsideration, it is also respectfully submitted that this application is in condition for allowance and such action is therefore respectfully requested.

If an extension of time is required for this response to be considered as being timely filed, a conditional petition is hereby made for such extension of time. Please charge any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 50-2041.

Respectfully submitted,



Marshall M. Curtis
Reg. No. 33,138

Whitham, Curtis, Christofferson & Cook, P. C.
11491 Sunset Hills Road, Suite 340
Reston, Virginia 20190

(703) 787-9400
Customer Number: **30743**